DYSTONIC REACTIONS TO METOCLOPRAMIDE (MAXOLON)

by

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METOCLOPRAMIDE has been used in the treatment of various gastro-intestinal disorders for over a decade. Dystonic reactions to metoclopramide have been reported previously by Casteels-Van Daele et al (1970) and also Witzel (1968). The symptoms of dystonia appeared in their patients following the administration of metoclopramide in doses exceeding 0.5 mg/kg body weight for longer than a 24-hour period.

CASE REPORTS

Case 1: A girl, aged two and a half years and weighing 14 kg was admitted with a history of constipation and vomiting for five days prior to admission. She had been given a single dose of 5 ml (5 mg) of metoclopramide syrup. One hour later she became dysarthic and also dysphagic. The whole episode lasted for one hour. She was admitted to hospital for observation and remained well and was discharged 24 hours later.

Case 2: A girl, aged three and a half months and weighing 5 kg was admitted to hospital with a 48-hour history of diarrhoea and two episodes of vomiting. She had been given 2 ml (2 mg) of metoclopramide syrup. Forty-five minutes after administration of metoclopramide she suddenly had an oculogyric crisis and persisting head retraction. On admission to hospital she had head retraction and a general increase in muscle tone. The whole episode lasted for half-an-hour and then recurred more briefly two hours later. She had no further spasms after this and was discha.ged 48 hours later from hospital.

Case 3: A boy, aged ten years and six months and weighing 36 kg was admitted to hospital with a history of a flu-like illness and vomiting for the previous 48 hours. He had been treated with metoclopramide 5 mg eight hourly for the previous 48 hours. He suddenly became dysarthic and developed a left-sided torticollis. His fingers became stiff and he was unable to grasp objects. The whole episode lasted one and a half hours. After admission to hospital he had no further spasms and he was discharged 48 hours later.

Case 4: A girl, aged eleven months and weighing 11 kg was admitted with a history of a diarrhoeal illness for 24 hours and had also vomited on five occasions over the same period. She had been given 2.5 ml (2.5 mg) of metoclopramide syrup and five hours after this she had a brief respiratory arrest and then persisting upward deviation of her eyes lasting five to ten minutes. After admission to hospital she remained well and was discharged 48 hours later.

Case 5: A girl, aged nine and a half years and weighing 34 kg was admitted with a 48 hour history of abdominal pain but no vomiting or diarrhoea. She had been treated at home with metoclopramide tablets 5 mg twice a day in the first 24 hour

period and then three times a day in the second 24 hour period. She suddenly developed spinal torsion and an associated right-sided torticollis. She became exceedingly frightened and also was dysarthric. The spasms fluctuated, lasting 10 to 15 minutes over one and a half hour period, and then did not recur again.

None of the above children had evidence of dehydration nor had they any personal or family history of epilepsy.

DISCUSSION

Metoclopramide has been described as having two sites of action (Drug & Therapeutic's Bulletin, 1976). It firstly increases the peristalic activity of the upper parts of the upper intestine. It has been suggested that this is caused by antagonism of a purinergic relaxation system in the intestine. Its effect in causing rapid gastric emptying has lead to its use in the treatment of gastro-intestinal disorders, and also radiological investigations particularly in adults and in children for jejunal biopsy procedures. The drug secondly, has an effect on the central nervous system by blocking dopaminergic reactions which in themselves may lead to nausea and vomiting. It has been suggested, however, (Drug & Therapeutic's Bulletin, 1976) that metoclopramide may block the dopaminergic functions at low doses while only causing disturbances of movement or muscle tone at higher doses. It has previously been suggested that dystonic reactions should not occur in patients receiving less than 0.5 mg/kg body weight of metoclopramide. (Robinson, 1973; Committee on Safety of Medicines, 1975). However, in our patients the amount of the drug per kilogram was less than 0.5 mg/kg body weight, varying between 0.36 to 0.44 mg/kg of body weight. Moreover, three of the five children developed reactions within six hours of having a single dose of the drug. All the children appeared to be frightened by the reaction and their parents were also upset assuming that the children might have had an epileptic fit or in one case a stroke. All our cases occurred over a period of eighteen months in a paediatric population of approximately 40,000. We have had anecdotal reports of other cases having occurred at home but these have either been milder or have been treated by their own general practitioner. It would seem, therefore, the incidence of reaction may have been somewhat higher than is generally appreciated. We would, therefore, suggest that metoclopramide is used cautiously in children and its use be reserved for those children who have persistent vomiting, rather than being prescribed more non-specifically in the treatment of abdominal pain, or diarrhoea as at present apparently occurs. We also suggest that a smaller dose should be prescribed than is presently recommended, and considerations be given to the use of other anti-emetic drugs. Lastly, parents should be warned in advance, that dystonic reactions may occasionally occur following the use of metoclopramide.

SUMMARY

Five cases of dystonic reactions following oral administration of metoclopramide are described. These reactions occurred over an eighteen month period in a paediatric population of 40,000. The reactions occurred despite the fact the drug was administered in the suggested therapeutic quantity. The reactions lasted from

five to forty-five minutes and varied in severity from a brief respiratory arrest to dystharia and torticollis. We therefore suggest that the drug be prescribed in smaller amounts than previously suggested, and parents are warned of the possibility of reaction which may occur after administration.

REFERENCES:

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